

**REMARKS**

Claims 1-66 are pending in the present application, of which claims 2, 31-37, 40, 45, 50, 63 and 66 are restricted from consideration pursuant to an election. Therefore, claims 1, 3-30, 38, 39, 41-44, 46-49, 51-62, 64, and 65 are at issue. Each of the claims at issue is rejected under 35 U.S.C. § 102(a) as allegedly anticipated by Rekimoto et al. (hereinafter "Rekimoto"). The applicants traverse such rejections and respectfully request reconsideration.

**Claims 1, 13, 24 and 60 and their dependent claims are allowable over the cited art**

Claims 1, 13, 24 and 60 are amended herein to more clearly define what is meant by a "process control system" containing a plurality of process control devices and to clearly define the ability of systems recited by these claims to provide process information generated by one or more of a plurality of process control devices within the process control system.

Claims 1, 13, 24 and 60 recite one of a wearable computer, a device identification unit for use on a wearable computer, and a data storage/retrieval unit for use on a wearable computer, where such systems are adapted to be used in a process control system including a plurality of process control devices disposed within a process to identify a process control device based on a device feature or to attach a voice signal to the process control device, and which provide information generated by one or more of the plurality of process control devices during operation of the process to a user of the wearable computer.

Rekimoto does not disclose or suggest a system adapted for use in a process control system, i.e., one including a plurality of process control devices disposed within a process, much less one that provides a user with process control device information generated by one of the plurality of devices during operation of the process. Instead, Rekimoto system is limited to allowing a user to view "virtual" information created by and attached to objects by another person. Therefore, claims 1, 13, 24 and 60 are not anticipated by Rekimoto.

Moreover, Rekimoto does not provide any indication that the system it describes can be or should be modified to make it capable of working within a process control system to provide process information generated by a plurality of process control devices disposed within a process. It is clear that the prior art must teach or suggest each of the claim elements and must additionally provide a suggestion of, or an incentive for, the claimed combination of

elements to establish a *prima facie* case of obviousness. See *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985); *In re Royka*, 490 F.2d 981 (CCPA 1974) and M.P.E.P. § 2143. Because Rekimoto does not disclose or suggest using a wearable computer within a process control system environment, it follows that Rekimoto cannot render pending claims 1, 13, 24 and 60 obvious.

**Claims 38 and 46 and their dependent claims are allowable over the cited art**

Claims 38 and 46 are amended herein to more clearly define what is meant by a "process control system" containing a plurality of process control devices and to more clearly define a "process signal" indicating a physical characteristic, such as temperature, pressure, etc., of a process generated by one or more of the plurality of process control devices.

Claims 38 and 46 recite either a wearable computer system or a process control testing unit for use in a process control system that communicates with a wearable computer system, where the wearable computer system includes a processing unit, a computer readable memory, an input device adapted to produce an input signal, a remote communication device to communicate with the process control system and a software routine run on the processing unit. The software routine recited by these claims processes an input signal, such as a voice signal, a keyboard signal, etc., to develop a change signal indicating a change to be made in the process, such as a temperature, a pressure, etc., and communicates the change signal to the process control system to thereby cause the change to be made to the process signal.

The Examiner argues that Rekimoto clearly discloses that a user can communicate a change signal to a process control system, for example, by a user attaching an e-mail message to a person's office door. The system disclosed in Rekimoto does not and cannot communicate any change signal to a network to cause a change to be made in a process signal where such a process signal indicates a **characteristics of a process** during normal operation of the process, the way the system recited in claim 38 and 46 can cause a change to be made to such a process signal. Therefore, claims 38 and 46 are not anticipated by Rekimoto.

**Claim 55 and its dependent claims are allowable over the cited art**

Claim 55 is amended herein to more clearly define what is meant by a "process control system" containing a plurality of process control devices and to clearly define the process of making changes to a first image to create a second image.

Claim 55 recites an image viewing unit for use in a process control system including a first software routine capable of receiving an image, such as an image captured by a video camera, enabling an operator to make changes to the image, such as to highlight or mark an area of the image, and sending the image with the changes to a wearable computer. The image viewing unit recited in claim 55 also includes a second software routine capable of sending an image to an operator workstation, receiving another image from the operator workstation, and displaying the image received from the operator workstation on the image viewing unit. Together, these software routines allow a user of this system to communicate back-and-forth with an operator of a process control system using images of various devices within the process control system. This feature makes it easier for a user to work interactively with the operator.

The Examiner argues that this claim is anticipated by Rekimoto because the system disclosed by Rekimoto allows making an image change by adding a voice note or an e-mail. However, such capability of the system disclosed in Rekimoto allows a user to attach only a voice note or an e-mail to various objects in the environment, it does not allow a user to make **graphical changes to an image**, such as to highlight or mark an area of the image, the way the system recited in claim 55 allows a user to make changes to the image. Therefore, claim 55 is not anticipated by Rekimoto.

### **Conclusion**

In view of the foregoing, it is respectfully submitted that the above application is in condition for allowance. If there is any matter that the examiner would like to discuss, he is invited to contact the undersigned representative at the telephone number set forth below.

**APPLICANT'S INTERVIEW SUMMARY RECORD**

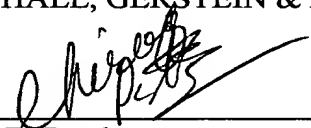
Applicants' attorney/agent Roger A. Heppermann and Chirag B. Patel conducted a number of telephone interviews with Examiner Wu on and after June 11, 2002. During these interviews, several claims of the present application were generally discussed and the Examiner invited the applicants to submit the amendments provided herein for further consideration. Furthermore, during these interviews Examiner Wu indicated that at least with respect to independent claims 1, 13, 24, 38, 46 and 60, the amendments provided herein will generally overcome the prior art cited in the final office action. The applicants' attorney/agent wish to thank Examiner Wu for his consideration in conducting these interviews and for his assistance during these interviews.

Respectfully submitted,

MARSHALL, GERSTEIN & BORUN

August 19, 2002

By:

  
\_\_\_\_\_  
Chirag B. Patel  
Reg. No. 50,555  
6300 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606-6402  
(312) 474-6300

**APPENDIX - VERSION OF CLAIMS WITH MARKINGS ILLUSTRATING  
CHANGES MADE**

1. (Amended) A wearable computer for use in a process environment having a process control system including a plurality of process control devices disposed within the process and external to the wearable computer, the wearable computer [therein,] comprising:

a processing unit;

a computer readable memory;

a heads up display;

an input device that provides an input signal to the processing unit; and

a software routine stored in the computer readable memory and run on the processing unit that processes the input signal and provides process information generated by one or more of the plurality of process control devices during operation of the process [pertaining] to the process control system via the heads up display.

13. (Amended) A wearable computer for use in a process control environment having a process control system including a plurality of process control devices disposed within the process and external to the wearable computer, the wearable computer [with multiple devices therein,] comprising:

a processing unit;

a memory;

an imaging device that produces an image signal; [and]

an image processor that processes the image signal to identify one of the [multiple] devices based on a device feature; and

a software routine stored in the memory and adapted to be executed on the processing unit to provide process information generated by one or more of the plurality of process control devices during operation of the process.

24. (Amended) A device identification unit adapted for use on a wearable computer having a processor and an imaging device that produces an image signal, where the wearable computer is adapted for use in a process control system including a plurality of

process control devices disposed within a process and external to the wearable computer, the device identification unit comprising:

a memory; and

a software routine stored in the memory and adapted to be executed on the processor to process the image signal to identify a device based on a device feature, and to provide process information generated by one or more of the plurality of process control devices during operation of the process.

38. (Amended) A wearable computer system for use in testing a process control system including a plurality of process control devices disposed within a process and external to the wearable computer, the wearable computer comprising:

a processing unit;

a computer readable memory;

an input device adapted to produce an input signal;

a remote communication device that communicates with the process control system;

and

a software routine run on the processing unit that processes the input signal to develop a change signal indicating a change to be made in a process signal within the process control system and that communicates the change signal to the process control system via the remote communication device to thereby cause a change to be made to the process signal, where the process signal indicates a characteristic of the process during normal operation of the process.

46. (Amended) A process control testing unit adapted for use in a process control system including a plurality of process control devices disposed within the process and external to a wearable computer, where the process control testing unit [that] communicates with [a] the wearable computer having a processor, an input device that develops an input signal, a remote communication device that communicates with the process control system and a heads up display, the process control testing unit comprising:

a memory; and

a software routine stored on the memory and adapted to be executed on the processor of the wearable computer to process the input signal so as to develop a change signal indicating a change to be made in a process signal within the process control system and to communicate the change signal to the process control system via the remote communication device to thereby cause the change to be made to the process signal, where the process signal indicates a characteristic of the process during normal operation of the process.

55. (Amended) An image viewing unit for use in a process control system including an operator workstation having an operator processing unit, an operator display and an operator remote communication device, and including a wearable computer having an imaging device that produces a first image, a portable display, a wearable remote communication device and a wearable processing unit, and a plurality of process control devices disposed within a process and external to the wearable computer, the image viewing unit comprising:

a first computer readable memory having a first software routine stored therein, said first software routine capable of being implemented on the operator processing unit to perform the functions of;

receiving a second image from the wearable computer via the operator remote communication device, wherein the second image is derived from the first image,

displaying the second image on the operator display,

enabling an operator to make changes to the displayed second image to create a third image, and

sending the third image to the wearable computer via the operator remote communication device; and

a second computer readable memory having a second software routine stored therein, said second software routine capable of being implemented on the wearable processing unit to perform the functions of;

creating the second image from the first image by making graphical changes to the first image,

sending the second image to the operator workstation via the wearable remote communication device,

receiving the third image from the operator workstation via the wearable remote communication device, and

displaying the third image on the portable display.

60. (Twice amended) A data storage/retrieval unit adapted for use in a wearable computer adapted for use in a process control system including a plurality of process control devices disposed within a process and external to the wearable computer, the wearable computer having a processor, a microphone that produces a voice signal, an input device that produces an input signal, a speaker and a heads up display, the data storage/retrieval unit comprising:

a computer readable memory;

a first software routine stored on the computer readable memory and adapted to be executed on the processor of the wearable computer that identifies a process control device based on a device feature captured by the input signal;

a second software routine stored on the computer readable memory and adapted to be executed on the processor of the wearable computer that receives the voice signal from the microphone and stores the received voice signal as being linked to the identified process control device in a further memory associated with the wearable computer in response to a first user input to store the received voice signal; [and]

a third software routine stored on the computer readable memory and adapted to be executed on the processor of the wearable computer that provides an indication via the heads up display that a previously stored voice signal is available for the identified process control device when the previously stored voice signal exists for the identified process control device in the further memory and that plays the previously stored voice signal for the identified process control device on the speaker in response to a second user input selecting the previously stored voice signal for the identified process control device for retrieval; and

a fourth software routine stored on the computer readable memory and adapted to be executed on the processor of the wearable computer that provides process information generated by one or more of the plurality of process control devices during operation of the process.